

WHAT IS CLAIMED IS:

1. An implantable composite intraluminal prosthesis comprising:

a substantially continuous polytetrafluoroethylene tubular inner body;

a longitudinally non-continuous outer tubular body; and

a circumferentially distensible support structure interposed between the inner and

5 outer tubular bodies, said outer tubular body being formed of polytetrafluoroethylene components, having a longitudinal length and a width, said longitudinal length being greater than said width, said components completely overlying the distensible support structure, whereby axial and circumferential compliance is provided to said prosthesis.

2. A composite intraluminal prosthesis according to claim 1 wherein the outer polytetrafluoroethylene body comprises a polytetrafluoroethylene tape spirally wrapped with a plurality of helical turns in a circumferential direction around the inner tubular body and distensible support structure, wherein each helical turn of said spiral wrap defines one of said

5 polytetrafluoroethylene components.

3. A composite intraluminal prosthesis according to claim 1 wherein the outer polytetrafluoroethylene body comprises segments of polytetrafluoroethylene tape, each wrapped circumferentially around the inner tubular body and distensible support structure wherein each turn of said segments defines one of said polytetrafluoroethylene components.

4. A composite intraluminal prosthesis according to claim 1 wherein the outer polytetrafluoroethylene body comprises first and second polytetrafluoroethylene tapes interweaved through each other around the inner tubular body, said first and second tapes defining said components.

5. A composite intraluminal prosthesis according to claim 1 wherein the outer tubular body comprises three or more polytetrafluoroethylene tapes arranged in a braided tubular configuration, said three or more tapes defining said components.

6. A composite intraluminal prosthesis according to claim 4 or 5 wherein a sealant is interspersed between said tapes.

7. A composite intraluminal prosthesis according to claim 1 wherein said continuous polytetrafluoroethylene tubular inner body is comprised of a sheet of expanded polytetrafluoroethylene formed into a tubular shape by wrapping said sheet about a longitudinal axis.

8. A method of providing axial and circumferential compliance to an intraluminal prosthesis stent/graft composite comprising:

combining a non-continuous polytetrafluoroethylene tubular outer body over a substantially continuous polytetrafluoroethylene tubular inner body, wherein said outer body and inner body support a distensible support structure therebetween, said outer body completely covering

the distensible support structure, said outer body is formed by tubularly-assembled polytetrafluoroethylene components.

9. A method according to claim 8 wherein the non-continuous outer tubular body is formed by spirally wrapping a polytetrafluoroethylene tape with a plurality of helical turns in a circumferential direction around the inner tubular body and distensible support structure to form an outer tubular body, wherein each helical turn of said spiral wrap defines one of said polytetrafluoroethylene components.

10. A method according to claim 8 wherein the non-continuous outer tubular body is formed by circumferentially wrapping segments of a polytetrafluoroethylene tape around the inner tubular body and distensible support structure to form an outer tubular body wherein each circumferential turn of said segments defines one of said polytetrafluoroethylene components.

11. A method according to claim 8 wherein the outer tubular body is formed by interweaving first and second polytetrafluoroethylene tapes through each other and about the continuous polytetrafluoroethylene inner tubular body and distensible support structure wherein said first and second tapes define said components.

12. A method according to claim 8 wherein the outer tubular body is formed by arranging three or more polytetrafluoroethylene tapes in a braided configuration, wherein said three or more tapes define said components.

13. A method according to claim 11 or 12 wherein a sealant is interspersed between said tapes.

14. A method according to claim 8 wherein the substantially continuous polytetrafluoroethylene tubular inner body is formed by wrapping a sheet of polytetrafluoroethylene around a mandrel into a tubular structure.

15. A method of providing axial and circumferential compliance to an intraluminal prosthesis stent/graft composite, comprising:

combining a polytetrafluoroethylene strip and a distensible support structure to form an assembly strip; and

combining said assembly strip with a substantially continuous inner tubular body support by wrapping said assembly strip about said inner tubular body support in a non-overlapping pattern, such that the assembly strip completely covers the distensible support structure forming a non-continuous outer tubular body of polytetrafluoroethylene components.

16. The method of claim 15 wherein segments of said assembly strip are wrapped circumferentially about said inner tubular body support, to form a non-continuous outer tubular body of polytetrafluoroethylene components.

17. The method of claim 15 wherein the polytetrafluoroethylene strip is a tape.

18. The method of claim 17, wherein the assembly strip is wrapped with a plurality of helical turns around the inner tubular body, each helical turn defining one of said polytetrafluoroethylene components.

19. A method of making an implantable intraluminal stent/graft composite prosthesis comprising:

- a) providing a continuous ePTFE tubular inner body;
- b) wrapping a stent about said continuous ePTFE tubular inner body, in a non-

5 overlapping relationship; and

- c) wrapping an ePTFE strip about the tubular inner body and stent, to completely overly the stent.

20. A method of making an implantable intraluminal stent/graft prosthesis, comprising:

- a) providing an ePTFE strip, having a length greater than its width;
- b) providing an unwrapped stent;
- c) assembling the stent with the strip to make an assembly strip with a stent side and an ePTFE strip side;

- d) providing a continuous tubular inner body; and
- e) wrapping the assembly strip around the inner body in non-overlapping relationship, such that the stent is completely covered.